

April 17, 2019

Summit Homes  
120 SE 30th St  
Lees Summit, MO 64082

**RE: Subgrade Inspection for Lot # 72 Manor at Stoney Creek, 4422 SW  
Amethyst Dr Lees Summit, MO 64082. Permit #PRRES20190489**

On April 16, 2019,, a special inspection was performed by Residential Engineering Services, LLC (R.E.S.) at the above referenced property. The purpose of this inspection was to determine structural adequacy of the existing soil for construction of concrete foundation.

**Findings:**

- The soils observed at footing elevation were degraded limestone boulders and reddish brown soft clay.

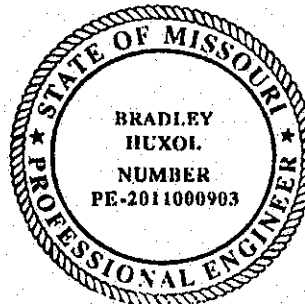
**Recommendations:**

- Entire footprint shall be over-excavated 3ft to natural competent soil and backfilled with compacted AB3 to reach proposed footing elevation.
- Engineered AB3 material (or equivalent) at or near optimum moisture content of 5% shall be placed in 8" loose lifts and compacted to 95% of maximum dry density to return to proposed footing elevation.
- Footings shall be enlarged by 8" (i.e. 16"x8" shall be 24"x8") with three (3) #4 rebar continuous (see attached specifications)
- Basement and garage pier pads shall be enlarged at least 6" (i.e existing 30"x30" shall be enlarged to 36"x36", etc.)

We would like to thank you for the opportunity to consult you on your project. Please feel free to contact us if you have any questions regarding this report or need any further consultation.

Sincerely,

Bradley Huxol, PE



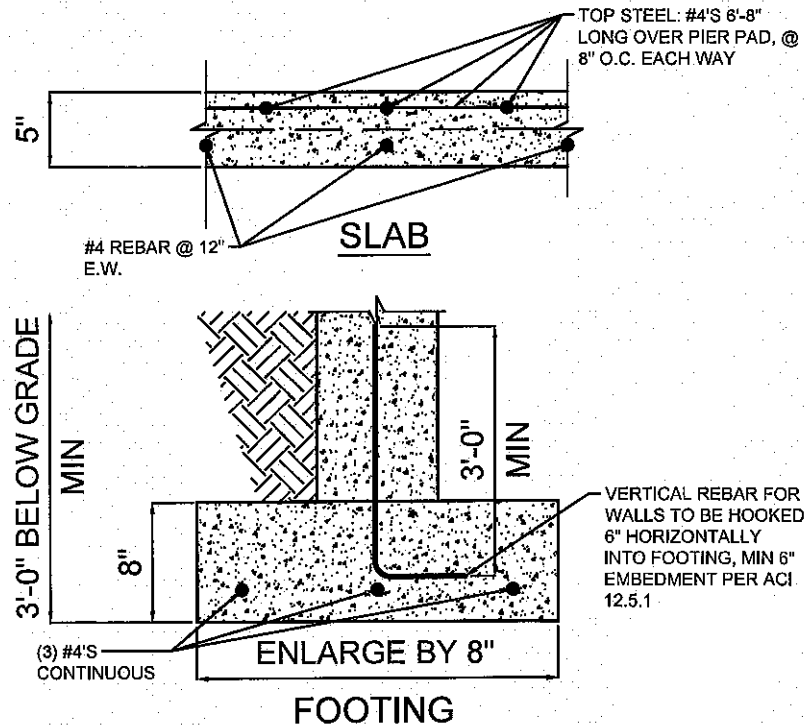
**NOTE:**

- MAXIMUM 9'-0" WALL HEIGHT
- USE REBAR AS SHOWN ON DRAWING OR XX LB/YD<sup>3</sup> HELIX 5-25 DESIGNED IN ACCORDANCE WITH UNIFORM-ES ER-0279

**ALTERNATIVE PIER PAD SCHEDULE**

| PAD SIZE    | ADJUSTED PAD SIZE | REINFORCEMENT    | SLAB TOP STEEL  | HELIX DOSAGE       |
|-------------|-------------------|------------------|-----------------|--------------------|
| 30"x30"x12" | 38"x38"x12"       | (8) #4 BAR E.W.  | (4) #4 BAR E.W. | 11.5 LB/CUBIC YARD |
| 36"x36"x12" | 42"x42"x14"       | (7) #4 BAR E.W.  | (5) #4 BAR E.W. | 11.5 LB/CUBIC YARD |
| 42"x42"x14" | 48"x48"x16"       | (8) #4 BAR E.W.  | (6) #4 BAR E.W. | 11.5 LB/CUBIC YARD |
| 48"x48"x16" | 54"x54"x16"       | (9) #4 BAR E.W.  | (8) #4 BAR E.W. | 11.5 LB/CUBIC YARD |
| 54"x54"x16" | 60"x60"x16"       | (10) #4 BAR E.W. | (7) #4 BAR E.W. | 11.5 LB/CUBIC YARD |

NOTE: PIER PAD SCHEDULE HAS BEEN INCREASED WITH THE USE OF THIS SPREAD FOOTING DETAIL. TABLE IS BASED ON RES SPECIFICATION REFERENCES AND MAY NOT DIRECTLY TRANSLATE TO PLANS ENGINEERED BY OTHER FIRMS. REFER TO SITE SPECIFIC DESIGN FOR PIER PAD SIZES.



**ALTERNATIVE HELIX OPTION:**

- SLAB HELIX DOSAGE = 12.5 LB/YD<sup>3</sup>
- FOOTING HELIX DOSAGE = 11.5 LB/YD<sup>3</sup>
- PIER PAD HELIX DOSAGE = 11.5 LB/YD<sup>3</sup>
- HORIZONTAL REBAR IS NOT REQUIRED IN FOOTINGS FOR HELIX.
- SLAB ONLY REQUIRES TOP STEEL REBAR OVER PIER PADS FOR HELIX.
- VERTICAL REBAR IN WALL IS STILL REQUIRED. HOOK REBAR 6" HORIZONTALLY INTO FOOTING @ 24" O.C.

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| REVISION |      |      |
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| NO.      | TYPE | DATE |
| 1        |      |      |
| 2        |      |      |
| 3        |      |      |
| 4        |      |      |
| 5        |      |      |

**SPREAD FOOTING  
DETAIL  
N.T.S.**

RESIDENTIAL ENGINEERING  
SERVICES, LLC  
WWW.RES-KC.COM  
600 SW JEFFERSON  
SUITE 302  
LEE'S SUMMIT MO 64063  
816-399-4901

